FINAL – 9/22/04

CLEAN AIR ACT SECTION 112(r) INSPECTION REPORT

Work Assignment TDD# 02-04-11-002
JCI Jones Chemicals, Inc. - Caledonia
Caledonia, NY

Stationary Source	JCI Jones Chemicals, Inc. - Caledonia
Date of Inspection	December 10,2003
USEPA	John Ulshoefer, USEPA – Region II
Contractor	Mike McCue, Environmental Compliance Inc.
Description of Activities	Program audit consisted of the following activities:

STATIONARY SOURCE INFORMATION

EPA Facility ID #	1000-0015-3415
Facility Location	100 Sunny Sol Boulevard Caledonia, NY 14423 Livingston County
Location and Approximate Size of Stationary Source	24 employees; non-union workforce Registered with 720,000-lbs. of Chlorine (CAS# 7782-50-5) and 360,000-lbs. of Sulfur Dioxide (CAS# 7446-09-5). Registered inventory based on contents of four 90-ton rail cars (R/C) of chlorine and two R/C of sulfur dioxide. The facility repackages chlorine and sulfur dioxide into smaller containers (1-ton, 150-lb., etc.) and produces

	sodium hypochlorite and sodium bisulfite.
Description of Surrounding Area	Industrial / Commercial
Participants	The following JCI JONES personnel participated in the inspection: Ryan Jones Branch Manager – Caledonia Will Wadsworth Plant Manager - Caledonia Timothy J. Gaffney Executive VP – Caledonia, NY Don Shelc* Director of Safety – Caledonia, NY Dan Casmey V.P. Security-RMP/PSM Coordinator - Norman May Cl2 cylinder filler - Caledonia * NOTE: Lead contact during inspection.

REGISTRATION INFORMATION

Date of Initial Submission	Most recent submission on 6/18/99.
Program Level (as reported in RMP)	Program 3
Process ID #	20224 – Chlorine
NAICS Code	325181 (Alkalines and Other Chlorine Manufacturing)
Program Level (as reported in RMP)	Program 3
Process ID #	20223 – Sulfur Dioxide
NAICS Code	325188 (All Other Basic Inorganic Chemical Manufacturing)

GENERAL COMMENTS

The JCI Jones Chemicals, Inc. (JCI Jones), Caledonia facility repackages chlorine and sulfur dioxide into smaller containers (1-ton, 150-lb., etc.) and produces sodium hypochlorite and sodium bisulfite. The facility is located on 10 acres in a rural area, bordered by farm land to the north, farm land and residences to the east, Caledonia Country Club to the south, and residences to the west. The nearest resident is an estimated 0.2 miles away. The executive summary in the RMP*Submit does not provide all required information. The RMP*Submit should be updated to reflect the change in covered process chemicals and to provide information required in the executive summary.

JCI Jones describes the two RMP covered process as the Chlorine / Bleach Vat System and Sulfur Dioxide / Bisulfite System. The Chlorine / Bleach Vat System includes:

Rail car (R/C) receipt and hook-up
Chlorine feed piping
150-lb. and ton fill station
Bleach Vat and heat exchanger

The Sulfur Dioxide / Bisulfite Vat System includes:

Rail car (R/C) receipt and hook-up
Sulfur Dioxide feed piping
150-lb. and ton fill station
Bisulfite Vat and heat exchanger

The Chlorine / Bleach Vat System involves two operations. The fill operation entails repackaging of chlorine into 150-lb. and 1-ton cylinders. Empty cylinders are evacuated at the cylinder or ton dump station, as appropriate. Cylinders are filled, based on customer orders, at the cylinder fill station and ton fill station. Cylinders are transported by truck to customers as far away as southern New Jersey, Pennsylvania and Connecticut. Sodium hypochlorite is produced in the Bleach Vat in a chemical reaction with sodium hydroxide. Sodium hypochlorite is transported to customers in drums and bulk containers.

The Sulfur Dioxide / Bisulfite Vat System involves two operations. The fill operation entails repackaging of sulfur dioxide into 150-lb. and 1-ton cylinders. Empty cylinders are evacuated at the cylinder or ton dump station, as appropriate. Cylinders are filled, based on customer orders, at the cylinder fill station and ton fill station. Cylinders are transported by truck to customers. Sodium Bisulfite is produced in the Bisulfite Vat in a chemical reaction with sodium hydroxide. Sodium Bisulfite is transported to customers in drums and bulk containers.

Gas detectors are located around the R/C hook-up station, fill stations, dump stations and vat systems. The detectors are set to alarm at 1 PPM for Chlorine and initiate shutdown of chlorine feed unloading and feed at 2.5 PPM. The detectors are set to alarm at 2.5 PPM for Sulfur Dioxide, and initiate shutdown of Sulfur Dioxide feed unloading and feed at 5 PPM. Alarms will sound in the warehouse. A panic button is strategically located at the fill station from the chlorine/sulfur dioxide room. This allows an operator to shutdown the chlorine or sulfur dioxide railcars in case of an emergency.

RMP DOCUMENTATION

Facility management demonstrated a complete understanding and appreciation for the intent of RMP. Don Shelc, Director of Safety, is responsible for overall RMP program coordination. Mr. Shelc is also responsible for implementation of specific RMP program elements. Management demonstrated a good understating and commitment to risk management.

Comments regarding select RMP elements follow:

Process Safety Information (PSI)

The facility maintains a PSI file, including detailed information on the hazards of the materials in the process, technology of the process, and equipment in the process. PSI includes detailed piping and instrument diagrams (P&IDs). Some drawings are not dated and all drawings reviewed do not contain a drawing number and a revision number. The facility should review all drawings and amend the drawings to include a drawing number, a date and a revision number.

Process Hazard Analysis (PHA)

The initial PHAs, a HAZOP study, was performed in May 1998. Chlorine and Sulfur Dioxide PHAs were revalidated in July 2001. The HAZOP study team included employee participation. JCI Jones developed a HAZOP template that was utilized for a number of similar JCI Jones facilities. The template was made site specific for the Caledonia facility. Recommendations from the PHA were all resolved in a timely manner. The facility should complete the revalidation of the PHA utilizing site specific PSI rather than a generic template.

Standard Operating Procedures (SOPs)

The facility has detailed written SOPs, outlining step-by-step procedures. The facility has a technical manual containing details on equipment, the technology of the process, and description of safety systems. The SOPs and technical manual are readily available to employees in hard copy. There is an annual certification of the SOPs by Don Shelc (3/6/03).

Training

JCI JONES has a well defined operator training program, with excellent recordkeeping. Operator training is job specific, including both classroom and on-the-job. A written test it given to confirm the operators' understanding of the training received. Refresher training is provided every year via monthly safety training meetings that cover a specific safety topic based on a corporate training matrix. Hard copy records are maintained to track the training status of employees.

Mechanical Integrity

Inspection and test frequency of equipment is generally per vendor recommendations or established through plant operating / maintenance history. Equipment maintenance records are tracked using specific equipment tracking numbers. The mechanical integrity program is work order driven, whereby a work order is issued by the system per the established schedule, assigned to a maintenance employee, completed, documented, and filed. Records and reports of mechanical integrity performed by outside contractors are also maintained on file at the facility.

Management of Change (MOC) & Pre-Startup Review (PSR)

The facility's has written MOC and PSR programs. The following MOC was reviewed: Prevention of Cl2 or SO2 backflow to compressor(s) 03/05/01. No PSRs were conducted for any MOC. MOC documentation is complete and detailed. JCI JONES needs to review and amend the MOC/PSR based on regulatory requirements, particularly in regards to the definition of a "change".

Compliance Audits

The facility has a written policy for conducting PSM/RMP compliance audits. The last PSM audit was conducted on 2/02/02. The audit report is detailed and includes a schedule for resolving audit recommendations. JCI JONES uses hard copy forms to track and document resolution of the audit recommendations.

Incident Investigation

The facility has a written policy for conducting incident investigations. Incidents are investigated by a qualified team, with complete and detailed reports. Incident reports are maintained on file for at least five years. There were four incidents within the last five years reported in the RMP*Submit. There were three incidents during calendar year 2003:

- Minor SO2 spill leak 08/18/03
- Minor Cl2 release from leaking ball valve at rail car 06/16/03
- Minor Cl2 release at CL2 cylinder filling station 06/11/03

JCI JONES uses hard copy forms to track and document resolution of the incident investigation report recommendations.

Employee Participation

The facility has a written employee participation program. JCI JONES implements employee participation as part of "PSM of Highly Hazardous Chemicals SF IV 1 Rev. 6/12/98." JCI JONES regularly meets with employees during monthly safety meetings to cover a specific safety topic based on a corporate training matrix. A Job Safety Analysis has been conducted on all jobs related to the Chlorine / Bleach Vat System and Sulfur Dioxide / Bisulfite System.

Hot Work Permit

The facility has a written hot work permit program. Hot work permits are used to control hot work on-site. The following hot work permits were reviewed:

- Welding of Boiler End Tubes: Welding 07/15/03 - 07/15/03
- ENS Tank MI-T-ENS-2: Cutting out part of tank base 12/03/03 - 12/04/03

Management System

JCI JONES has a written description of the management system. Don Shelc, Director of Safety, is assigned responsibility for the RMP.

Contractor Safety

JCI JONES has a written contractor safety program. JCI JONES maintains a Preferred Contractor List 11/18/02. The contractors and associated documentation was reviewed:

- Contractor Evaluation SF IV 06/14/02
- Rochester Scale 12/02
- R.W. Lindsay PM Compressor #1/2 12/2001

Emergency Response

JCI JONES's emergency response plan was reviewed by the USEPA inspector.

Facility Tour

The initial meeting occurred in the plant office which is located east of the processing building. Chlorine and Sulfur Dioxide rail cars are staged to the north of the processing building and the filling/manufacturing operations occur within the building. Gas detectors are located around the R/C hook-up station, fill stations, dump stations and vat systems. The detectors are set to alarm at 1 PPM for Chlorine and initiate shutdown of chlorine feed unloading and feed at 2.5 PPM. The detectors are set to alarm at 2.5 PPM for Sulfur Dioxide, and initiate shutdown of Sulfur Dioxide feed unloading and feed at 5 PPM. Alarms will sound in the warehouse. A panic button is strategically located at the fill station from the chlorine/sulfur dioxide room. This allows an operator to shutdown the chlorine or sulfur dioxide railcars in case of an emergency. Norman May (14 years as JCI Jones employee), Chlorine Cylinder Filler, was interviewed.

Two security cameras are directed at the railcar hook-up. The cameras are wired to a monitor in the supervisor's office. The site is not fenced, with unimpeded access to the rail cars. The facility operates one day shift, Monday through Friday, 4AM - 4PM. The railcars are disconnected, buttoned down, and locked during periods of non-operation. The facility has not developed written site security procedures.

FINDINGS/RECOMMENDATIONS

The executive summary in the RMP*Submit does not provide all required information. **The RMP*Submit should be updated to reflect the change in covered process chemicals and to provide information required in the executive summary.**

Some drawings are not dated and all drawings reviewed do not contain a drawing number and a revision number. **The facility should review all drawings and amend the drawings to include a drawing number, a date and a revision number.**

The facility should complete the revalidation of the PHA utilizing site specific PSI rather than a generic template.

JCI JONES needs to review and amend the MOC/PSR based on regulatory requirements, particularly in regards to the definition of a "change".

RMP Sufficiency Inspection Date: December 10, 2003
FINAL – 9/22/04

Process audited: *JCI Jones Chemicals, Inc. Caledonia, MY*

Auditor: *John Ulshoefer, USEPA – Region II, & Mike McCue, Environmental Compliance Inc. (contractor to USEPA)*

Instructions: This checklist may be used for verification of RMP and Program compliance (Check boxes coding: Y=Yes, N=No, P=Partial, A=Not Applicable)

Note: Compliance Objectives appear in the order they appear in the RMP rule

	COMPLIANCE OBJECTIVES		NOTES
	1. RISK MANAGEMENT PROGRAM AND PLAN (SUBPART A)		
	Applicability [68.1]		
Y	Does the owner or operator of the stationary source have more than a threshold quantity of a regulated substance in a process? [68.10(a)]		*Yes for both processes.*
N	Has the process had, in the five years prior to submission of the RMP, an accidental release of a regulated substance where exposure to the substance, its reaction products, overpressure generated by an explosion involving the substance, or radiant heat generated by a fire involving the substance led to any of the following off-site: (i) Death; (ii) Injury; or (iii) Response or restoration activities for an exposure of an environmental receptor? [68.10(b)(1)]		*No for both processes*
N	Is the distance to a toxic or flammable endpoint for a worst-case release assessment less than the distance to any public receptor? [68.10(b)(2)]		*No for both processes.*
Y	Has the owner or operator coordinated emergency response procedures between the stationary source and local emergency planning and response organizations? [68.10(b)(3)]		*Yes for both processes.*
Y	Is the covered process subject to OSHA PSM standard, 29 CFR 1910.119? [68.10(d)(2)]		*Yes for both processes.*
Y	Is the covered process in one of the NAICS codes listed in 40 CFR §68.10(d)(1)? [68.10(d)(1)]		*NAICS codes are 325181 (Alkalies & Chlorine Manufacturing) and 325188 (All Other Basic Inorganic Chemical Manufacturing).*
	Auditor may need to re-answer 1.5 and 1.6 for multiple processes in comments section.		
	General Requirements [68.12]		
Y	Has the owner or operator submitted a single RMP, which included a registration that reflects all covered processes, as provided in 68.150 to		*RMP submitted on June 18, 1999.*

COMPLIANCE OBJECTIVES		NOTES
	68.185? [68.12(a)]	
A	For Program 1 processes audited, has the owner or operator: [68.12(b)]	*Not applicable.*
A	For Program 2 processes, has the owner or operator: [68.12(c)]	*Not applicable.*
Y	0. For Program 3 processes, has the owner or operator: [68.12(d)]	*Registered as two Program 3 processes.*
Y	0.1. Developed and implemented a management system as provided in 68.15? [68.12(d)(1)]	
Y	0.2. Conducted a hazard assessment as provided in 68.20 through 68.42? [68.12(d)(2)]	
Y	0.3. Implemented the prevention requirements provided in 68.65 through 68.87? [68.12(d)(3)]	
Y	0.4. Developed and implemented an emergency response program as provided in 68.90 to 68.95? [68.12(d)(4)]	
Y	0.5. Submitted, as part of the RMP, the data on prevention program elements for Program 3 processes as provided in 68.175? [68.12(d)(5)]	
Management [68.15]		
	Has the owner or operator:	
Y	1. Developed a management system to oversee the implementation of the risk management program elements? [68.15(a)]	
Y	2. Assigned a qualified person or position that has the overall responsibility for the development, implementation, and integration of the risk management program elements? [68.15(b)]	
Y	3. Documented other persons responsible for implementing individual requirements of the risk management program and defined the lines of authority through an organization chart or similar document? [68.15(c)]	
General Findings / Conclusions:		
Documentation obtained to support Findings / Conclusions:		
2. RMP SUBMISSION (SUBPART G) 68.150 - 68.190		
Y	Did the owner or operator submit an RMP on or before June 21, 1999? Postmark date of initial submission: [68.10, 68.10(a)(1), 68.150(a)	

	COMPLIANCE OBJECTIVES	NOTES
	& (b)]	
	If submission was after June 21, 1999, was submittal required because: [68.10 & 68.150(b)]	
A	Has the owner or operator revised and updated the RMP within 5 years of initial submission? Date of the last revision and update [68.190(a)]:	*Not applicable.*
N	If required, has the owner or operator submitted a revised RMP for any of the following: [68.190(b)]	
N	Has the owner or operator included information submitted as CBI in the RMP? [68.150(d)]	
A	1. If so, were the provisions of 68.151 and 68.152 followed ?	*Not applicable.*
RMP: Executive Summary		
	Has the owner or operator included a brief description of the following elements in the executive summary of the RMP: [68.155]	
Y	1. The accidental release prevention and emergency response policies at the stationary source? [68.155(a)]	
N	2. The stationary source and regulated substances handled? [68.155(b)]	
N	4. The worst-case release and alternative release scenario(s), including administrative controls and mitigation measures to limit the distances for each reported scenario? [68.155(c)]	
Y	5. The general accidental release prevention program and chemical-specific prevention steps? [68.155(d)]	
Y	6. The five-year accident history? [68.155(e)]	
N	7. The emergency response program? [68.155(f)]	
N	8. Planned changes to improve safety? [68.155(g)]	*No description of planned changes to improve safety.*
RMP: Registration		
Y	Has the owner or operator included a single registration form in the RMP which covers all regulated substances handled in covered processes? [68.160(a)]	
	Does the registration include the following data: [68.160(b)]	
Y	1. Stationary source name, full address, Dun and Bradstreet number; longitude and latitude with method and description? [68.160(b)(1) & (2)]	

	COMPLIANCE OBJECTIVES	NOTES
P	2. Corporate parent company name and Dun and Bradstreet number? [68.160(b)(3)]	No Corporate DUNS.
Y	3. The name, telephone number, and mailing address of the owner or operator? [68.160(b)(4)]	
Y	4. The name and title of the person or position with overall responsibility for RMP elements and implementation? [68.160(b)(5)]	
Y	5. The name, title, telephone number, and 24-hour number of the emergency contact? [68.160(b)(6)]	
Y	6. For each covered process, the name and CAS number of each regulated substance held above the threshold quantity in the process, the maximum quantity of each regulated substance or mixture in the process, the NAICS code, and the Program level of the process? [68.160(b)(7)]	
Y	7. The stationary source EPA identifier? [68.160(b)(8)]	
Y	8. The number of full-time employees at the stationary source? [68.160(b)(9)]	
Y	9. Whether the stationary source is subject of 29 CFR §1910.119, OSHA's Process Safety Management Standard? [68.160(b)(10)]	
Y	10. Whether the stationary source is subject to 40 CFR Part 355, the Emergency Planning Requirements of the Emergency Planning and Community Right-to-Know Act? [68.160(b)(11)]	
Y	11. If the stationary source has a CAA Title V operating permit, its permit number? [68.160(b)(12)]	Title V not applicable.
Y	12. The date of the last safety inspection of the stationary source by a Federal, state, or local government agency and the identity of the inspecting entity? [68.160(b)(13)]	
RMP: Off-site Consequence Analysis		To be reviewed by USEPA.
RMP: Five-year accident history		4 accidents reported in RMP submission.
RMP: Prevention program / Program 2 [68.17]		Not applicable.
RMP: Prevention program / Program 3 [68.175]		
	3. Has the owner or operator included in the RMP information addressing 68.175(b) to 68.175(p)? [68.175(a)]	
Y	3.1. The NAICS code for the process? [68.175(b)]	
Y	3.2. The name(s) of the substance(s) covered? [68.175(c)]	

	COMPLIANCE OBJECTIVES	NOTES
Y	3.3. The date on which the safety information was last reviewed or revised? [68.175(d)]	
Y	3.4. The date of completion of the most recent process hazard analysis (PHA) or update and the technique used? [68.175(e)]	*Listed as 05/10/98 for both processes.*
Y	3.4.1. The expected date of completion of any changes resulting from the PHA? [68.175(e)(1)]	*Listed as 05/10/98 for both processes.*
Y	3.4.2. Major hazards identified? [68.175(e)(2)]	
Y	3.4.3. Process controls in use? [68.175(e)(3)]	
Y	3.4.4. Mitigation systems in use? [68.175(e)(4)]	
Y	3.4.5. Monitoring and detection systems in use? [68.175(e)(5)]	
Y	3.4.6. Changes since the last PHA? [68.175(e)(6)]	
Y	3.5. The date of the most recent review or revision of operating procedures? [68.175(f)]	
Y	3.6. The date of the most recent review or revision of training programs? [68.175(g)]	
Y	3.6.1. The type of training provided--classroom, classroom plus on the job, on the job? [68.175(g)(1)]	
Y	3.6.2. The type of competency testing used? [68.175(g)(2)]	
Y	3.7. The date of the most recent review of revision of maintenance procedures and the date of the most recent equipment inspection or test and the equipment inspected of tested? [68.175(h)]	
Y	3.8. The date of the most recent change that triggered management of change procedures and the date of the most recent review or revision of management of change procedures? [68.175(i)]	
Y	3.9. The date of the most recent pre-startup review? [68.175(j)]	
Y	3.10. The date of the most recent compliance audit and the expected date of completion of any changes resulting from the compliance audit? [68.175(k)]	
Y	3.11. The date of the most recent incident investigation and the expected date of completion of any changes resulting from the investigation? [68.175(l)]	*N/A for Sulfur Dioxide. 7/14/97 for Chlorine.*
Y	3.12. The date of the most recent review or revision of employee participation plans? [68.175(m)]	
Y	3.13. The date of the most recent review or revision of hot work permit procedures? [68.175(n)]	
Y	3.14. The date of the most recent review or revision of contractor safety procedures? [68.175(o)]	
Y	3.15. The date of the most recent evaluation of contractor safety	

	COMPLIANCE OBJECTIVES	NOTES
	performance? [68.175(p)]	
	RMP: Emergency Response Program [68.18]	
	4. Has the owner or operator included the following information in the RMP on the emergency response program: [68.18]	
Y	4.1. Does a written emergency response plan exist? [68.180(a)(1)]	
Y	4.2. Does the plan include specific actions to be taken in response to an accidental releases of a regulated substance? [68.180(a)(2)]	
Y	4.3. Does the plan include procedures for informing the public and local agencies responsible for responding to accidental releases? [68.180(a)(3)]	
Y	4.4. Does the plan include information on emergency health care? [68.180(a)(4)]	
Y	4.5. Date of the most recent review of update of emergency response plan? [68.180(a)(5)]	
Y	4.6. Date of the most recent emergency response training for employees? [68.180(a)(6)]	
Y	5. Has the owner or operator provided the name and telephone number of the local agency with which emergency response activities and the emergency response plan is coordinated? [68.180(b)]	
Y	6. Has the owner or operator listed other Federal or state emergency plan requirements to which the stationary source is subject? [68.180(c)]	
	RMP: Certification [68.185]	
	7. Has the owner or operator: [68.185]	
A	8. For Program 1 processes, submitted the certification statement in 68.12(b)(4)? [68.185(a)]	
Y	9. For Program 2 or 3 processes, submitted the appropriate certification statement that to the best of the signer's knowledge, information, and belief formed after reasonable inquiry, the information submitted is true, accurate, and complete? [68.185(b)]	
	General Findings / Conclusions:	

COMPLIANCE OBJECTIVES		NOTES
Documentation obtained to support Findings / Conclusions:		
3. HAZARD ASSESSMENT (SUBPART B) 68.20 - 68.42		
Hazard Assessment: Applicability [68.2]		*To be reviewed by USEPA.*
Hazard Assessment: Five-year accident history [68.42]		
Y	2. Has the owner or operator included all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage? [68.42(a)]	
Y	3. Has the owner or operator reported the following information for each accidental release: [68.42(b)]	
General Findings / Conclusions:		
Documentation obtained to support Findings / Conclusions:		
4. PROGRAM 2 PREVENTION PROGRAM (SUBPART C) [68.48 - 68.60]		*Not applicable.*
5. PROGRAM 3 PREVENTION PROGRAM (SUBPART D) [68.65 - 68.87]		
Program 3 Prevention - Process safety information [68.65]		
Y	Has the owner or operator compiled written process safety information, which includes information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process, before conducting any process hazard analysis required by the rule? [68.65(a)]	*Refer to PSI recommendation.*
	Does the process safety information contain the following for hazards of the substances: [68.65(b)]	
Y	1. Toxicity information? [68.65(b)(1)]	*Available in MSDS.*
Y	2. Permissible exposure limits? [68.65(b)(2)]	*Available in MSDS.*

	COMPLIANCE OBJECTIVES	NOTES
Y	3. Physical data? [68.65(b)(3)]	*Available in MSDS.*
Y	4. Reactivity data? [68.65(b)(4)]	*Available in MSDS.*
Y	5. Corrosivity data? [68.65(b)(5)]	*Available in MSDS.*
Y	6. Thermal and chemical stability data? [68.65(b)(6)]	*Available in MSDS.*
Y	7. Hazardous effects of inadvertent mixing of materials that could foreseeably occur? [68.65(b)(7)]	*Available in MSDS.*
	Does the process safety information contain the following for technology of the process: [68.65(c)(1)]	
Y	1. A block flow diagram or simplified process flow diagram? [68.65(c)(1)(i)]	
Y	2. Process chemistry? [68.65(c)(1)(ii)]	
Y	3. Maximum intended inventory? [68.65(c)(1)(iii)]	
Y	4. Safe upper and lower limits for such items as temperatures, pressures, flows or compositions? [68.65(c)(1)(iv)]	
Y	5. An evaluation of the consequences of deviations? [68.65(c)(1)(v)]	*Addressed in PHA reports.*
	Does the process safety information contain the following for the equipment in the process: [68.65(d)(1)]	
Y	1. Materials of construction? [68.65(d)(1)(i)]	
Y	2. Piping and instrument diagrams? [68.65(d)(1)(ii)]	
Y	3. Electrical classification? [68.65(d)(1)(iii)]	
Y	4. Relief system design and design basis? [68.65(d)(1)(iv)]	
Y	5. Ventilation system design? [68.65(d)(1)(v)]	
Y	6. Design codes and standards employed? [68.65(d)(1)(vi)]	
A	7. Material and energy balances for processes built after June 21, 1999? [68.65(d)(1)(vii)]	
Y	8. Safety systems? [68.65(d)(1)(viii)]	
Y	Has the owner or operator documented that equipment complies with recognized and generally accepted good engineering practices? [68.65(d)(2)]	
A	Has the owner or operator determined and documented that existing equipment, designed and constructed in accordance with codes, standards, or practices that are no longer in general use, is designed, maintained, inspected, tested, and operating in a safe manner? [68.65(d)(3)]	

	COMPLIANCE OBJECTIVES	NOTES
	Program 3 Prevention - Process hazard analysis [68.67]	
Y	Has the owner or operator performed an initial process hazard analysis (PHA), and has this analysis identified, evaluated, and controlled the hazards involved in the process? [68.67(a)]	*Initial PHA performed in May 1998 for both processes.*
A	Has the owner or operator determined and documented the priority order for conducting PHAs, and was it based on a appropriate rationales? [68.67(a)]	
Y	Has the owner or operator used one or more of the following technologies: [68.67(b)]	
☐	1. What-If? [68.67(b)(1)]	
☐	2. Checklist? [68.67(b)(2)]	
☐	3. What-If/Checklist? [68.67(b)(3)]	
Y	4. Hazard and Operability Study (HAZOP)? [68.67(b)(4)]	
☐	5. Failure Mode and Effects Analysis (FMEA)? [68.67(b)(5)]	
☐	6. Fault Tree Analysis? [68.67(b)(6)]	
☐	7. An appropriate equivalent methodology? [68.67(b)(7)]	
	0. Did the PHA address: [68.67(c)]	
Y	0.1. The hazards of the process? [68.67(c)(1)]	
Y	0.2. Identification of any incident which had a likely potential for catastrophic consequences? [68.67(c)(2)]	
Y	0.3. Engineering and administrative controls applicable to hazards and interrelationships? [68.67(c)(3)]	
Y	0.4. Consequences of failure of engineering and administrative controls? [68.67(c)(4)]	
Y	0.5. Stationary source siting? [68.67(c)(5)]	
Y	0.6. Human factors? [68.67(c)(6)]	
Y	0.7. An evaluation of a range of the possible safety and health effects of failure of controls? [68.67(c)(7)]	
Y	1. Was the PHA performed by a team with expertise in engineering and process operations and did the team include appropriate personnel? [68.67(d)]	

	COMPLIANCE OBJECTIVES	NOTES
Y	2. Has the owner or operator established a system to promptly address the team's findings and recommendations; assured that the recommendations are resolved in a timely manner and documented; documented what actions are to be taken; completed actions as soon as possible; developed a written schedule of when these actions are to be completed; and communicated the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations? [68.67(e)]	
A	3. Has the PHA been updated and revalidated by a team every five years after the completion of the initial PHA to assure that the PHA is consistent with the current process? [68.67(f)]	*Refer to PHA recommendation.*
Y	4. Has the owner or operator retained PHAs and updates or revalidations for each process covered, as well as the resolution of recommendations for the life of the process? [68.67(g)]	
Program 3 Prevention - Operating procedures [68.69]		
Y	5. Has the owner or operator developed and implemented written operating procedures that provide instructions or steps for conducting activities associated with each covered process consistent with the safety information? [68.69(a)]	
	6. Do the procedures address the following: [68.69(a)]	
	6.1. Steps for each operating phase: [68.69(a)(1)]	
Y	6.1.1. Initial startup? [68.69(a)(1)(i)]	
Y	6.1.2. Normal operations? [68.69(a)(1)(ii)]	
Y	6.1.3. Temporary operations? [68.69(a)(1)(iii)]	
Y	6.1.4. Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner? [68.69(a)(1)(iv)]	
Y	6.1.5. Emergency operations? [68.69(a)(1)(v)]	
Y	6.1.6. Normal shutdown? [68.69(a)(1)(vi)]	
Y	6.1.7. Startup following a turnaround, or after emergency shutdown? [68.69(a)(1)(vii)]	
Y	6.2. Operating limits: [68.69(a)(2)]	
Y	6.2.1. Consequences of deviations? [68.69(a)(2)(i)]	
Y	6.2.2. Steps required to correct or avoid deviation? [68.69(a)(2)(ii)]	
Y	6.3. Safety and health considerations: [68.69(a)(3)]	

	COMPLIANCE OBJECTIVES	NOTES
Y	6.3.1. Properties of, and hazards presented by, the chemicals used in the process? [68.69(a)(3)(i)]	
Y	6.3.2. Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment? [68.69(a)(3)(ii)]	
Y	6.3.3. Control measures to be taken if physical contact or airborne exposure occurs? [68.69(a)(3)(iii)]	
Y	6.3.4. Quality control for raw materials and control of hazardous chemical inventory levels? [68.69(a)(3)(iv)]	
Y	6.3.5. Any special or unique hazards? [68.69(a)(3)(v)]	
Y	6.4. Safety systems and their functions? [68.69(a)(4)]	
Y	7. Are operating procedures readily accessible to employees who are involved in a process? [68.69(b)]	
Y	8. Has the owner or operator certified annually that the operating procedures are current and accurate and that procedures have been reviewed as often as necessary? [68.69(c)]	
Y	9. Has the owner or operator developed and implemented safe work practices to provide for the control of hazards during specific operations, such as logout/tagout? [68.69(d)]	
	Program 3 Prevention - Training [68.71]	
Y	10. Has each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, been initially trained in an overview of the process and in the operating procedures? [68.71(a)(1)]	
Y	11. Did initial training include emphasis on safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks? [68.71(a)(2) allows in lieu of initial training for those employees already involved in operating a process on June 21, 1999 an owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures] [68.71(a)(1)	
Y	12. Has refresher training been provided at least every three years, or more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process? [68.71(b)	
Y	13. Has owner or operator ascertained and documented in a record that each employee involved in operating a process has received and understood the training required? [68.71(c)]	

	COMPLIANCE OBJECTIVES	NOTES
Y	4. Does the prepared record contain the identity of the employee, the date of training, and the means used to verify that the employee understood the training? [68.71(c)]	
	Program 3 Prevention - Mechanical integrity [68.73]	
Y	5. Has the owner or operator established and implemented written procedures to maintain the on-going integrity of the process equipment listed in 68.73(a)? [68.73(b)]	
Y	6. Has the owner or operator trained each employee involved in maintaining the on-going integrity of process equipment? [68.73(c)]	
	Has the owner or operator:	
Y	7. Performed inspections and tests on process equipment? [68.73(d)(1)]	
Y	8. Followed recognized and generally accepted good engineering practices for inspection and testing procedures? [68.73(d)(2)]	
Y	9. Ensured the frequency of inspections and tests of process equipment is consistent with applicable manufacturers' recommendations, good engineering practices, and prior operating experience? [68.73(d)(3)]	
Y	10. Documented each inspection and test that had been performed on process equipment, which identifies the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test? [68.73(d)(4)]	
Y	11. Corrected deficiencies in equipment that were outside acceptable limits defined by the process safety information before further use or in a safe and timely manner when necessary means were taken to assure safe operation? [68.73(e)]	
Y	12. Assured that equipment as it was fabricated is suitable for the process application for which it will be used in the construction of new plants and equipment? [68.73(f)(1)]	
Y	13. Performed appropriate checks and inspections to assure that equipment was installed properly and consistent with design specifications and the manufacturer's instructions? [68.73(f)(2)]	
Y	14. Assured that maintenance materials, spare parts and equipment were suitable for the process application for which they would be used? [68.73(f)(3)]	
	Program 3 Prevention - Management of change [68.75]	

	COMPLIANCE OBJECTIVES	NOTES
Y	5. Has the owner or operator established and implemented written procedures to manage changes to process chemicals, technology, equipment, and procedures, and changes to stationary sources that affect a covered process? [68.75(a)]	*Refer to MOC recommendation.*
	6. Do procedures assure that the following consideration are addressed prior to any change: [68.75(b)]	
Y	6.1. The technical basis for the proposed change? [68.75(b)(1)]	
Y	6.2. Impact of change on safety and health? [68.75(b)(2)]	
Y	6.3. Modifications to operating procedures? [68.75(b)(3)]	
Y	6.4. Necessary time period for the change? [68.75(b)(4)]	
Y	6.5. Authorization requirements for the proposed change? [68.75(b)(5)]	
Y	7. Were employees, involved in operating a process and maintenance, and contract employees, whose job tasks would be affected by a change in the process, informed of, and trained in, the change prior to start-up of the process or affected part of the process? [68.75(c)]	
Y	7. If a change resulted in a change in the process safety information, was such information updated accordingly? [68.75(d)]	
Y	8. If a change resulted in a change in the operating procedures or practices, had such procedures or practices been updated accordingly? [68.75(e)]	
	Program 3 Prevention - Pre-startup review [68.77]	
A	9. Has the owner or operator performed a pre-startup safety review for new stationary sources and for modified stationary sources when the modification was significant enough to require a change in the process safety information,? [68.77(a)]	*No PSRs were performed.*
	0. Did the pre-startup safety review confirm that prior to the introduction of regulated substances to a process: [68.77(b)]	
A	0.1. Construction and equipment was in accordance with design specifications? [68.77(b)(1)]	
A	0.2. Safety, operating, maintenance, and emergency procedures were in place and were adequate? [68.77(b)(2)]	
A	0.3. For new stationary sources, a process hazard analysis had been performed and recommendations had been resolved or implemented before startup? [68.77(b)(3)]	
A	0.4. Modified stationary sources meet the requirements contained in management of change? [68.77(b)(3)]	

	COMPLIANCE OBJECTIVES	NOTES
A	0.5. Training of each employee involved in operating a process had been completed? [68.77(b)(4)]	
	Program 3 Prevention - Compliance audits [68.79]	
Y	1. Has the owner or operator certified that the stationary source has evaluated compliance with the provisions of the prevention program at least every three years to verify that the developed procedures and practices are adequate and are being followed? [68.79(a)]	
Y	2. Has the audit been conducted by at least one person knowledgeable in the process? [68.79(b)]	
Y	3. Are the audits findings documented in report? [68.79(c)]	
Y	4. Has the owner or operator promptly determined and documented an appropriate response to each of the findings of the audit and documented that deficiencies had been corrected? [68.79(d)]	
Y	5. Has the owner or operator retained the two most recent compliance audit reports? [68.79(e)]	
	Program 3 Prevention - Incident investigation [68.81]	
Y	6. Has the owner or operator investigated each incident which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance? [68.81(a)]	
Y	7. Were all incident investigations initiated not later than 48 hours following the incident? [68.81(b)]	
Y	8. Was an incident investigation team established and did it consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of the contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident? [68.81(c)]	
Y	9. Was a report prepared at the conclusion of every investigation? [68.81(d)]	
	10. Does every report include: [68.81(d)]	
Y	11.1. Date of incident? [68.81(d)(1)]	
Y	11.2. Date investigation began? [68.81(d)(2)]	
Y	11.3. A description of the incident? [68.81(d)(3)]	
Y	11.4. The factors that contributed to the incident? [68.81(d)(4)]	
Y	11.5. Any recommendations resulting from the investigation? [68.81(d)(5)]	

COMPLIANCE OBJECTIVES		NOTES
Y	2. Has the owner or operator established a system to address and resolve the report findings and recommendations, and are the resolutions and corrective actions documented? [68.81(e)]	
Y	3. Was the report reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable? [68.81(f)]	
Program 3 Prevention - Employee participation [68.83]		
	Has the owner or operator:	
Y	4. Developed a written plan of action regarding the implementation of the employee participation required by this section? [68.83(a)]	
Y	5. Consulted with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in chemical accident prevention provisions? [68.83(b)]	
Y	6. Provided to employees and their representatives access to process hazard analyses and to all other information required to be developed under chemical accident prevention rule? [68.83(c)]	
Program 3 Prevention - Hot work permit [68.85]		
Y	7. Has the owner or operator issued a hot work permit for each hot work operation conducted on or near a covered process? [68.85(a)]	
Y	8. Does the permit document that the fire prevention and protection requirements in 29 CFR 1910.252(a) have been implemented prior to beginning the hot work operations? [68.85(b)]	
Y	9. Does the permit indicate the date(s) authorized for hot work and the object on which hot works to be performed? [68.85(b)]	
Y	10. Are the permits being kept on file until completion of the hot work operations? [68.85(b)]	
Program 3 Prevention - Contractors [68.87]		
	Has the owner or operator: [68.87(b)]	
Y	11. Obtained and evaluated information regarding the contract owner or operator's safety performance and programs when selecting a contractor,? [68.87(b)(1)]	
Y	12. Informed contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process? [68.87(b)(2)]	

COMPLIANCE OBJECTIVES		NOTES
Y	3. Explained to the contract owner or operator the applicable provisions of emergency response program? [68.87(b)(3)]	
Y	4. Developed and implemented safe work practices consistent with §68.69(d), to control the entrance, presence, and exit of the contract owner or operator and contract employees in covered process areas? [68.87(b)(4)]	
General Findings / Conclusions:		
Documentation obtained to support Findings / Conclusions:		
6. EMERGENCY RESPONSE (SUBPART E) 68.90 - 68.95		
Emergency Response - Applicability [68.9]		*The facility emergency response plan was reviewed by the USEPA inspector. This checklist reflects the facility's response in the RMP*Submit report.*
Y	Has the owner or operator of a stationary source developed an emergency response program, unless the source need not comply? [68.90(a)]	
	If the employees of the stationary source will not respond to accidental releases of regulated substances:	
Y	For stationary sources with any regulated toxic substance held in a process above the threshold quantity, is the stationary source included in the community emergency response plan developed under EPCRA? [68.90(b)(1)]	
A	For stationary sources with only regulated flammable substances held in a process above the threshold quantity, has the owner or operator coordinated response actions with the local fire department? [68.90(b)(2)]	
Y	Are appropriate mechanisms in place to notify emergency responders when there is a need for a response? [68.90(b)(3)]	
Emergency Response - Applicability [68.9]		*The facility emergency response plan was reviewed by the USEPA inspector. This checklist reflects the facility's response in the RMP*Submit report.*
Y	Has the owner or operator developed and implemented an emergency response program for the purpose of protecting public health and the environment? [68.95(a)]	
	Does the program include the following elements: [68.95(a)]	
	1. An emergency response plan which is maintained at the	

	COMPLIANCE OBJECTIVES	NOTES
Y	stationary source? [68.95(a)(1)]	
Y	2. Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance? [68.95(a)(2)]	
Y	3. Training for all employees in relevant procedures? [68.95(a)(3)]	
Y	4. Procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes? [68.95(a)(4)]	
	Does the emergency response plan contain the following elements: [68.95(a)(1)]	
Y	1. Procedures for informing the public and local emergency response agencies about accidental releases? [68.95(a)(1)(i)]	
Y	2. Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures? [68.95(a)(1)(ii)]	
Y	3. Procedures and measures for emergency response after an accidental release of a regulated substance? [68.95(a)(1)(iii)]	
P	Did the owner or operator use a written plan that complies with other Federal contingency plan regulations or is consistent with the approach in the National Response Team's Integrated Contingency Plan Guidance ("One Plan")? If so, does the plan include the elements provided in paragraph (a) of 68.95, and also complies with paragraph (c) of 68.95? [68.95(b)]	
Y	Has the emergency response plan been coordinated with the community emergency response plan developed under EPCRA? [68.95(c)]	
Y	0. Has the owner or operator provided to the local emergency response officials information necessary for developing and implementing the community emergency response plan requested by the LEPC or emergency response officials? [68.95(c)]	
	General Findings / Conclusions:	
	Documentation obtained to support Findings / Conclusions:	